What is claimed is:

1. An electrode joint comprising two joined graphite electrodes and having a seal interposed between the electrodes, the seal comprising a material having an oxidation rate such that the oxidation rate of surfaces of the electrode joint is reduced.

2. The joint of claim 1 wherein the seal is compressible.

3. The joint of claim 2 wherein the seal comprises compressed particles of exfoliated graphite.

4. The joint of claim 3 wherein the electrical conductivity of the seal is greater in the direction extending between the electrodes than it is in the direction orthogonal thereto.

5. The joint of claim 4 wherein the seal comprises a spiral wound sheet of compressed particles of exfoliated graphite.

6. The joint of claim 3 wherein the two joined electrodes each comprise a female threaded socket machined therein and further comprising a pin comprising opposed male threaded sections which engage the female threaded sockets of the electrodes to form the joint.

7. The joint of claim 3 wherein one of the electrodes comprises a male threaded stub and the other electrode comprises a female threaded socket, wherein the male threaded stub engages the female threaded socket to form the joint.

8. A process for preparing a seal for use in an electrode joint, the process comprising providing a sheet of compressed particles of exfoliated graphite and winding the sheet to form a spiral wound seal suitable for use between the electrodes in an electrode joint.

9. The process of claim 8 wherein the seal has an outer diameter generally equal to the outer diameter of the electrode joint and a central opening.

10. The process of claim 9 wherein an adhesive is interposed between the layers of the spiral wound sheet of compressed particles of exfoliated graphite.

11. The process of claim 9 wherein the sheet of compressed particles of exfoliated graphite is wound around a bolster having a diameter equal to the central opening of the seal.

12. The process of claim 11 wherein the sheet of compressed particles of exfoliated graphite wound around a bolster is cut to the desired thickness after winding.

13. A seal for an electrode joint comprising a material having an oxidation rate equal to or less than that of the electrodes.

14. The seal of claim 13 wherein the seal is compressible.

15. The seal of claim 14 wherein the seal comprises compressed particles of exfoliated graphite.

16. The seal of claim 15 wherein the electrical conductivity of the seal when in place in an electrode joint is greater in the direction extending between the electrodes than it is in the direction orthogonal thereto.

17. The seal of claim 16 wherein the seal comprises a spiral wound sheet of compressed particles of exfoliated graphite.

18. The seal of claim 17 wherein a surface of the seal has a concave cross-section.

19. The seal of claim 17 wherein a surface of the seal has a corrugated cross-section.